(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 7 April 2005 (07.04.2005)

(10) International Publication Number WO 2005/031246 A2

(51) International Patent Classification7:

F42B

(74) Agent: HILL & SCHUMACHER?; 87 Falcon Street, Toronto, Ontario M4S 2P4 (CA).

- (21) International Application Number:
 - PCT/CA2004/001773
- (22) International Filing Date: 4 October 2004 (04.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/507,491

2 October 2003 (02.10.2003)

- (71) Applicant (for all designated States except US): THE UNIVERSITY OF WESTERN ONTARIO [CA/CA]; 1151 Richmond Street North, Stevenson-Lawson Building, Room 319, London, Ontario N6A 5B8 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PUSKAS, Judit, E. [CA/CA]; 1295 Sandy Lane, Unit 1215, Sarnia, Ontario N7V 4K5 (CA). EBIED, Amer [CA/CA]; 148 Clarendon Crescent, London, Ontario N6C 5B8 (CA). LAM-PERD, Barry [CA/CA]; 1200 Michener Road, Sarnia, Ontario N7T 7H8 (CA). KUMAR, Bhuwneesh [IN/CA]; 455 Platt's Lane, Apartment #32, London, Ontario N6G 3H2

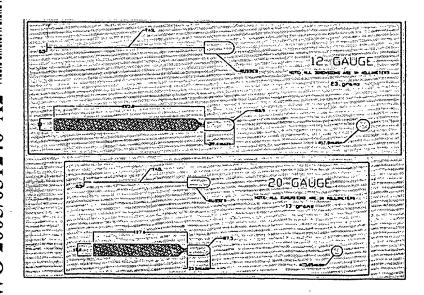
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
 - KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LESS-LETHAL AMMUNITION PROJECTILE



(57) Abstract: A high-density composite material and its use in the manufacture of less-lethal ammunition projectile is disclosed. The composite ammunition projectile material is produced from a compact mixture of fine iron powder, a highly damping, inert, non-toxic elastomer and an inert non-toxic thermoplastic elastomer. The composite ammunition projectile material is first blended, then the projectile is injection molded or compression molded. The density of the composite ammunition projectile material is adjustable in terms of ratio of iron powder to elastomer to thermoplastic elastomer block co-polymer, but a minimum density of 2.4 gcm⁻³ is preferred. A blend comprising an elastomer and a thermoplastic elastomer with low creep is also disclosed.

WO 2005/031246 A2